

## ORIGINATION FORM

### Proposed Revisions to the Specifications

(Please provide all information - incomplete forms will be returned)

Date:

Specification Section:

Originator:

Articles/Subarticles:

Telephone:

email:

Will the proposed revision involve Design Standard Index changes?      Yes      No

Roadway Design staff contacted (name):

Will the proposed revision involve PPM changes?      Yes      No

Roadway Design staff contacted (name):

Will the proposed revision involve CPAM changes?      Yes      No

Construction staff contacted (name):

Will the proposed revision involve Pay Item changes?      Yes      No

Estimates staff contacted (name):

Will the proposed revision involve SDG changes?      Yes      No

Structures staff contacted (name):

Will the proposed revision involve APL changes?      Yes      No

Product Evaluation staff contacted (name):

Will this revision necessitate any of the following:

Design Bulletin

Construction Bulletin

Estimates Bulletin

Are all references to external publications current?      Yes      No

If not, what references need to be updated (please include changes in the redline)?

Why does the existing language need to be changed?

Summary of the changes:

Are these changes applicable to all Department jobs?      Yes      No

If not, what are the restrictions?

Contact the State Specifications Office for assistance in completing this form.

Daniel Scheer 850-414-4130 [daniel.scheer@dot.state.fl.us](mailto:daniel.scheer@dot.state.fl.us)

Debbie Toole 850-414-4114 [deborah.toole@dot.state.fl.us](mailto:deborah.toole@dot.state.fl.us)

Frances Thomas 850-414-4101 [frances.thomas@dot.state.fl.us](mailto:frances.thomas@dot.state.fl.us)

Ray Haverty 850-414-4129 [ray.haverty@dot.state.fl.us](mailto:ray.haverty@dot.state.fl.us)



## *Florida Department of Transportation*

**RICK SCOTT**  
**GOVERNOR**

605 Suwannee Street  
Tallahassee, FL 32399-0450

**JIM BOXOLD**  
**SECRETARY**

### **M E M O R A N D U M**

**DATE:** June 22, 2015

**TO:** Specification Review Distribution List

**FROM:** Daniel Scheer, P.E., State Specifications Engineer

**SUBJECT:** Proposed Specification: **9700100 Materials for Raised Retroreflective Pavement Markers and Bituminous Adhesive.**

In accordance with Specification Development Procedures, we are sending you a copy of a proposed specification change.

This change was proposed by Chester Henson of the State Roadway Design Office to provide manufacturing criteria for Class D temporary markers. This change is associated with changes to 102, 710, and 990.

Please share this proposal with others within your responsibility. Review comments are due within four weeks and should be sent to Mail Station 75 or online at <http://www2.dot.state.fl.us/ProgramManagement/Development/IndustryReview.aspx> . Comments received after **July 21, 2015**, may not be considered. Your input is encouraged.

DS/ft  
Attachment

# **MATERIALS FOR RAISED RETROREFLECTIVE PAVEMENT MARKERS AND BITUMINOUS ADHESIVE.**

(REV ~~6-2-156-104-156-16-156-17-15~~)

ARTICLE 970-1 is deleted and the following substituted:

## **970-1 Raised Retroreflective Pavement Markers (RPM).**

*All raised pavement markers shall be one of the products listed on the Department's Approved Product List (APL). Manufacturers seeking evaluation of their product must submit an application in accordance with Section 6 and include independent testing showing the product meets the requirements of this section and 990. The Department will test all raised pavement markers in accordance with FM 5-566.*

~~970-1.1 Composition:~~ The marker shall consist of materials conforming to ASTM D4280.

~~970-1.2 Physical Requirements:~~ The physical size of the RPM shall conform to the requirements of ASTM D4280. Laboratory and field samples for RPMs and bituminous adhesives shall meet the requirements of ASTM D4280 and include the following requirements:

~~The minimum area of each retroreflective face for Class A and B RPMs shall be 2.5 square inches. The minimum base size for Class A and B RPMs shall be 12 square inches.~~

~~970-1.2.1 Designation of Marker Type, Color and Classification:~~ The marker description shall be in order of type, color and retroreflective surface condition in accordance with ASTM D4280 and the following chart.

| RPM Class |  |                         |                                 |
|-----------|--|-------------------------|---------------------------------|
| Class     | Description                                | Expected Normal Service | ASTM Surface Designation        |
| A         | Temporary marker                           | Up to six months        | none                            |
| B         | Permanent marker                           | Long life               | H, hard abrasion resistant lens |
| D         | Temporary, flexible - retroreflective tabs | One month               | Monodirectional yellow marker   |
|           |  |                         | Bidirectional yellow marker     |

## ~~970-1.3.2~~ **Performance Requirements.**

~~970-2.1 Class A and B Markers:~~ The RPM shall meet the performance requirements specified in ASTM D4280, Section 6.2, for luminous intensity, flexural strength, compressive strength, resistance to cracking, and thermal cycling, as modified herein. ~~Test method FM 5-566 will be used to evaluate marker performance.~~

~~970-12.31.1 Composition:~~ The marker shall consist of materials conforming to ASTM D4280.

~~970-12.31.2 Physical Requirements:~~ The physical size of the RPM shall conform to the requirements of ASTM D4280. Laboratory and field samples for RPMs and bituminous adhesives shall meet the requirements of ASTM D4280 and include the following requirements:

~~The minimum area of each retroreflective face shall be 2.5 square inches. The minimum base size shall be 12 square inches.~~

~~970-12.31.1.3 Class A Markers:~~ Meet the coefficient of luminous intensity requirements of ASTM D4280. Abrasion treatment is not required for Class A Markers.

**970-~~12.31.2.4~~ Class B (Abrasion Resistant) Markers:** Meet the coefficient of luminous intensity requirements of ASTM D4280 after abrasion. Each marker shall be marked as abrasion resistant by the manufacturer.

**970-~~12.31.3.5~~ In-~~service~~ *Service* Minimum *Retro*reflective Intensity:** The Class B *retro*reflective pavement marker shall retain a minimum coefficient of luminous intensity for 18 months of not less than 30% of the values shown in Table 1 of ASTM D4280, and a minimum luminous intensity of 0.2 cd/fc at the end of two years.

~~970-1.3.6.2.2 Application Properties: Application properties shall meet the requirements of Section 706.~~ ***Performance Requirements – Class D Markers:-: Meet the requirements of Section 990.***

~~970-1.5.3 Packaging and Labeling:-.~~

Shipment shall be made in containers which are acceptable to common carriers and packaged in such a manner as to ensure delivery is in perfect condition. Each package shall be clearly marked as to the name of the manufacturer, type, color, quantity enclosed and date of manufacture. Show the designation of the marker in accordance with ASTM D4280. *Show the product name as it appears on the APL.*